Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Partitioning, Disaggregation, and Leasing of Spectrum	)	WT Docket No. 19-38
	)	

To: The Commission

COMMENTS OF
OPEN TECHNOLOGY INSTITUTE AT NEW AMERICA
and PUBLIC KNOWLEDGE

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The Open Technology Institute at New America ("OTI") and Public Knowledge ("PK") submit these comments in response to the Commission's March 15, 2019 *Notice of Proposed Rulemaking* seeking comment on questions "related to the partitioning or disaggregation of spectrum licenses and spectrum leasing as a potential means to increase availability of advanced telecommunications services in rural areas and spectrum access by small carriers."[1]

I. Introduction and Summary

The Commission's stated goal in this proceeding is to promote more widespread deployments of high-capacity broadband in rural and other underserved areas by enhancing the incentives and procedures for secondary market access to unused spectrum licensed for exclusive use. Enabling more intense and efficient use of this public resource – rather than non-use and warehousing – without risk of harmful interference and without undermining the deployment plans of primary licensees is a goal that OTI and PK fully support.

[1] Notice of Proposed Rulemaking, *Partitioning, Disaggregation and Leasing of Spectrum*, WT Docket No. 19-38, FCC 19-22 (rel. March 15, 2019) ("*NPRM*").

However, OTI and PK believe that relying on partitioning and leasing alone – or making changes that focus on relaxing performance requirements for licensees – will result in an outcome contrary to Congressional intent, with even more spectrum lying fallow for longer periods and an even more daunting digital divide widening between urban and rural areas. History shows that larger carriers choose not to engage in secondary market transactions with smaller providers and choose to let spectrum lie fallow rather than partition or lease parts of their spectrum licenses. The national and regional mobile carriers that can afford to acquire expensive licenses covering very large areas (whether PEAs, CMAs or counties) have little or no incentive to participate in partitioning and leasing of spectrum to smaller competitive carriers. In addition to their understandable aversion to enabling potential competition, secondary market transactions today are also deterred by high transaction costs, cumbersome procedures, and a preference by licensees not to give up spectrum they may decide they want later for their own deployments.

Accordingly, OTI and PK recommend that the Commission adopt broader "use-it-or-share-it" rules as part of any effort to encourage secondary market access and more intensive use of spectrum for broadband. Conceptually, use-it-or-share-it rules authorize opportunistic access to licensed spectrum that is unused or underutilized in a specific area. Use-it-or-share-it rules would make sure there are limits on the ability of licensees to warehouse spectrum or exclude potential rural ISPs able to make use of that spectrum to help bridge the digital divide. A general authorization for opportunistic access on a use-it-or-share-it basis should be a central part of any effort aimed at expanding spectrum access for rural and non-traditional ISPs, as well as for enterprise and institutional use, in rural and underserved areas.

Use-it-or-share-it rules have been adopted by the Commission in relation to two significant flexible-use bands in recent years: the Citizens Broadband Radio Service (CBRS)

band at 3.5 GHz and continued unlicensed use of unused spectrum in the 600 MHz band following the TV incentive auction. Automated frequency coordination (AFC) systems, such as the one the Commission will soon prove is workable for controlling temporary and opportunistic access to locally-unused spectrum in the Priority Access License (PAL) portion of the CBRS band, can ensure that unused spectrum can be put to use in rural and other hard-to-serve areas without any risk of interference or any negative impact whatsoever on the primary licensee that has not yet built out.

Opportunistic access controlled by an automated AFC database would empower a wide variety of small and alternative providers to use fallow spectrum in local areas to provide high-speed broadband and other services, while retaining the licensee's right to exclusive use of that spectrum whenever the carrier commences service with its own operations in the licensed band. Unleashing opportunistic, shared access to fallow spectrum creates a general incentive for licensees to build out services more quickly, or to make greater efforts to partition or lease, since opportunistic use of the band will demonstrate that other (typically smaller) operators are finding value in the unused portions of their license area. This will reduce spectrum warehousing and increase access to operators that are ready to deploy, but who lack spectrum access in a local area. Automated frequency coordination brings additional benefits that directly encourage partition and leasing, including demand discovery and lower transaction costs. Database coordination can also, for the first time, give the FCC itself visibility into what areas are receiving service or not on a licensed band throughout the license term.

Use-it-or-share-it rules are crucial to stimulating a robust secondary market that will help bridge the digital divide, particularly in rural areas. Even temporary relief for consumers in these areas would go a long way to helping bridge the rural-urban digital divide.

II. Incentives and Opportunities Limited to Partitioning and Leasing are Inadequate

Relying solely on licensees and market forces to transfer unused spectrum to other users, particularly smaller and potentially competitive ISPs, through partitioning and leasing has proven there is a market failure. Since the very first auctions in 1994, a policy to facilitate nationwide coverage has led to license areas that are extremely large and typically incorporate areas with disparate characteristics (urban, suburban, exurban and rural) over geographies far larger than are practical for small ISPs or for enterprise and institutional users (e.g., corporate and university campuses, ports, etc.). As the Wireless Internet Service Providers Association (WISPA) argued in the Citizens Broadband Radio Service (CBRS) proceeding, "historically, large carriers acquire licenses for large areas, build out in the urban core where the population is more dense, and warehouse spectrum in rural areas that could be used for broadband deployment."[2] The largest carriers have a history of warehousing spectrum and leaving it fallow rather than making it available for use to catalyze broadband deployment or other services.[3] For licensees, there are no obvious incentives to share or partition their spectrum absent specific rules such as use-or-share.

Precedent suggests that secondary markets for partitioning and leasing rarely result in smaller providers being able to access fallow spectrum. According to a 2017 survey of WISPA members, 25 percent of respondents said that they had made efforts to obtain licensed spectrum from AT&T, Verizon, Sprint or T-Mobile – and that less than 10 percent of the WISPs who tried to obtain spectrum successfully did so.[4] The Commission's licensing records corroborates

[2] Comments of the Wireless Internet Service Providers Association, GN Docket No. 12-354, at 25 (July 24, 2017), https://ecfsapi.fcc.gov/file/10724505007250/CBRS%20Comments.pdf.
[3] Comments of Ruckus Wireless, GN Docket No. 12-354 (July 24, 2017) at 5 ("Further, the changes would greatly impair the formation of a dynamic secondary trading market for PAL licenses or access, due to the concentration of a smaller number of PAL licenses into the hands of a few very large companies that are not well known for making fallow licensed spectrum available to others.").
[4] Comments of the Wireless Internet Serv. Providers Association at A-3, GN Docket No. 17-258 at 43-44 (filed Dec. 28, 2017).

WISPA's information, showing that carriers that generally obtain large-area licenses at auctions rarely interact in secondary market transactions with smaller competitive providers.[5]

Further, secondary market transactions are subject to high transaction costs. The Commission acknowledges this shortcoming in its original 2015 CBRS Order: "Traditional licensing areas will not allow users of the band to acquire PALs only for those specific geographic areas they intend to serve. Divesting large, unwanted swaths through secondary markets transactions could impose significant transactions costs."[6]

Other reasons that secondary market transactions have not put nearly enough unused spectrum to work in rural and underserved areas include the difficulty potential buyers face in finding information about available spectrum where they need it. There is no database of available spectrum by geographic area. In fact, the Commission itself has no idea what portions of a license area are built out and serving customers. Since performance requirements are expressed in terms of a share of the license area's overall population, milestones are satisfied by serving mainly cities and suburbs – and the FCC could still not know how much licensed spectrum remains fallow in a particular small town or rural area.

Another obstacle exacerbated by the opaque and one-off nature of secondary market transactions are the administrative process and the complex and costly negotiations for secondary rights.[7] Transaction costs fall disproportionately on smaller and rural operators who then have to "incur spectrum leasing costs that are likely to be higher for them than for a large national

[5] Mobile Future, FCC Spectrum Auctions and Secondary Market Policies: An Assessment of the Distribution of Spectrum Resources Under the Spectrum Screen (Nov. 2013), at 19, available at http://mobilefuture.org/wp-content/uploads/2013/11/Paper-Distribution-ofSpectrum-Resources.pdf.
[6] Report and Order and Second Further Notice of Proposed Rulemaking, GN Docket No. 12-354 (April 17, 2015) ¶ 100.
[7] See Joe Kane, *How To Reduce Transaction Costs In Spectrum Markets*, R Street Policy Study No. 166, 5 (Mar. 2019), *available at* https://2o9ub0417chl2lg6m43em6psi2i-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/Final-166-Updated1.pdf.

operator who is likely already to have an in-house team to manage spectrum transactions," according to economist William Lehr.[8] With the advent of geolocation databases and blockchain, transparency could be enhanced and transaction costs for all parties minimized if the overall framework for secondary access is tied coordination by an AFC database that would also fully protect the *use rights* (and not the warehousing rights) of licensees.

The above-detailed shortcomings of secondary markets result in harms to smaller and rural providers in particular, since large carriers inherently have few incentives to negotiate small, one-off partitions or leases that reduce their own flexibility. If a larger carrier commits to a partition or lease, it reduces that carrier's optionality to deploy in that area later when circumstances change. In contrast, under a use-or-share framework, a carrier would be able to allow opportunistic access to fallow spectrum with the ability to recall that spectrum for its own operations whenever it likes. Indeed, during the early years of a license a carrier may be entirely focused on building out in areas with the highest ARPU, and that carrier may not have decided when the spectrum will be put to use in rural and other less profitable areas—if the carrier ever does intend on doing so.

There are large swaths of spectrum across low-, mid-, and high-bands that remain unused in low-density or low-ARPU areas even after licensees satisfy population-based performance requirements. The Commission should seek to allow other providers to use that spectrum on an opportunistic basis to bring higher-speed broadband services to more Americans. The current partitioning and leasing framework has proven inadequate to achieve this goal on its own.

[8] "Analysis of Proposed Modifications to CBRS PAL Framework," William Lehr (Dec. 28, 2017), https://ecfsapi.fcc.gov/file/1228227728544/Lehr%20CBRS%20Comments%2017-258.pdf at 12.

III. A General Use-it-or-Share-it Rule Would Promote More Intensive Spectrum Use and Secondary Market Transactions in Rural and Other Underserved Areas

The Commission seeks comment on "whether to establish a program, or modify existing programs, for the partitioning, disaggregation, and leasing of licenses"[9] and, more specifically, on the potential "incentives that might encourage licensees to lease or sell spectrum to covered small carriers or unaffiliated carriers that will serve rural areas…"[10] OTI and PK urge the Commission to adopt use-it-or-share-it rules for all exclusively-licensed IMT bands to promote more intensive use of the spectrum, as well as stronger incentives and mechanisms to encourage secondary market transactions. Only both approaches in tandem will result in more widespread availability of high-capacity broadband in rural and other underserved areas of the country.

Use-it-or-share-it rules ensure licensees cannot warehouse spectrum indefinitely or exclude potential rural ISPs able to make use of that spectrum to help bridge the digital divide. Automated frequency coordination (AFC) systems, such as the one the Commission will soon prove is workable for controlling temporary and opportunistic access to the Priority Access License (PAL) portion of the CBRS band, can ensure that unused spectrum is put to use in rural and other hard-to-serve areas without any risk of interference or any negative impact whatsoever on the primary licensee that has not yet built out.

A. Use-it-or-Share-it Authorizations Should be Extended to All Flexible Use Bands

Use-it-or-share-it rules have been adopted by the Commission in relation to two significant flexible-use bands in recent years and should be a central part of any effort aimed at expanding spectrum access for rural and non-traditional ISPs, as well as for enterprise and

[9] NPRM at ¶ 14.
[10] Id. at ¶ 25.

institutional use, in rural and underserved areas. Conceptually, use-it-or-share-it rules authorize opportunistic access to licensed spectrum that is unused or underutilized in a specific area. An authorization for opportunistic, shared use can (and should) gives licensees a guarantee that opportunistic users will vacate the spectrum once notified that the licensee is ready to commence service in that local area and that it will never result in harmful interference to the primary licensee's operations.[11]

The authorization of opportunistic access takes a more affirmative, non-punitive approach than the more draconian concept of "use it or lose it," where licensees would be forced to forfeit spectrum in areas that fall short of strict build-out requirements. Indeed, the Commission could decide to permit licensees to attribute all or a portion of the areas served by opportunistic users to their own performance in relation to build-out requirements.

Unleashing opportunistic, shared access to fallow spectrum creates a general incentive for licensees to build out services more quickly, or to make greater efforts to partition or lease, since opportunistic use of the band will demonstrate that other (typically smaller) operators are finding value in the unused portions of their license area. This will reduce spectrum warehousing and increase access to operators that are ready to deploy, but who lack spectrum access in a local area. All of these effects – and others described below – will advance the stated and statutory goal of this proceeding to stimulate secondary markets and, ultimately, ensure that rural and other underserved areas are more likely to receive coverage and higher-capacity broadband service sooner rather than years and years later.[12]

[11] *See* Michael A. Calabrese, "Use it or Share it: Unlocking the Vast Wasteland of Fallow Spectrum," New America Foundation, presented at 39th Research Conference on Communication, Information and Information Policy (TPRC) (Sep. 23, 2011).
[12] *Ibid.*

The Commission has recently set two important precedents for use-it-or-share-it rules that suggest this approach can promote spectrum access, efficiency and use in underserved areas more generally. The Commission, in adopting the new Citizens Broadband Radio Service Rules (CBRS) for the 3.5 GHz band, included a use-it-or-share rule, stating: "We believe that the 'use it or share it' approach of our rules for this unique band also thus more reasonably accommodates the goals of Section 309(j) of the Act, including 'to prevent stockpiling or warehousing of spectrum.'"[13] The use-it-or-share-it rules for CBRS authorize any operator to coordinate access to unused PAL spectrum on an opportunistic basis. Permission to make General Authorized Access (GAA) use of unused PAL spectrum in a local area must be granted by a certified Spectrum Access System that ensures the PAL spectrum is not in use and will not interfere with licensee operations. The SAS database thereby facilitates – on an automated basis at low cost – the spectrum sharing needed to ensure that all the spectrum in the 3.5 GHz band is available for use. The application of the use-it-or-share-it rules in the CBRS context reflects precisely the goals the Commission seeks to achieve through this proceeding.

In the record for the CBRS proceeding, many commenters supported use-it-or-share-it rules, including T-Mobile, WISPA, Google, the Wi-Fi Alliance, the Utilities Telecom Council, Shared Spectrum Company, Southern Company Services, Spectrum Bridge, and the White Spaces Alliance.[14] The Commission retained the use-it-or-share-it rules when it changed the CBRS rules last year, stating in the *Report and Order* that "[t]argeted use cases are already encouraged by the "use-or-share" nature of the band and the GAA tier."[15] The Commission elaborated on the importance of such rules, explaining that "Priority Access Licensees will be

[13] Order on Reconsideration and Second Report and Order, GN Docket No. 12-354, at ¶ 177 (April 28, 2016).
[14] Comments of the Open Technology Institute, Institute for Local Self-Reliance, Public Knowledge, and Common Cause, GN Docket No. 12-354, at 19-23 (Aug. 15, 2014).
[15] *Report and Order*, GN Docket No. 17-258, at ¶ 37 (Oct. 23, 2018).

incentivized to sell on the secondary market spectrum within their license area that may lie outside of their current network build or that they otherwise do not need access to for their future deployments."[16]

More recently, the Commission adopted a use-it-or-share-it approach to unlicensed use of the 600 MHz band following the TV incentive auction. The Commission authorized the continued operation of unlicensed on unused licensed spectrum following the auction. On a localized basis, the Commission authorized unlicensed TV White Space devices to operate indefinitely in unused portions of the exclusively-licensed 600 MHz band until the licensee notifies a certified TV Bands Database (TVDB) that it is ready to commence service in that specific area. Since TVWS users must renew their permission to transmit every 24 hours, an opportunistic automatically loses the ability to continue transmit in that location.

In adopting opportunistic access to unused 600 MHz spectrum post-auction, the Commission declared: "We will permit the continued operation of TVWS devices on repurposed spectrum except in those areas in which a 600 MHz Band licensee commences operations… Since TVWS devices can operate only on channels identified in the TV bands databases, these databases can serve to ensure that unlicensed operations will no longer occur on a channel on which a licensee has commenced service. When a 600 MHz Band licensee plans to commence operations on frequencies that include channels available for unlicensed operations under the rules for TVWS devices, that licensee can notify any of the TV bands database administrators when and where it plans to commence operations."[17] The implementation of this policy, a temporary use-it-or-share-it protocol, reflects how database administrators can facilitate this

[16] *Id.* at ¶ 101.
[17] *Report and Order*, GN Docket No. 12-268 (May 15, 2014), ¶ 680.

spectrum sharing between licensees and other parties who wish to share unused spectrum in a local area.

As detailed in the examples above, a relatively static frequency coordination database can manage and automate the process. Examples include TVDBs (already in operation), multiple SAS operators (about to go into operation), and the Automated Frequency Coordination (AFC) the Commission has proposed to manage unlicensed sharing in large portions of the 6 GHz band. Even a simple, static database can verify that a proposed deployment will not interfere with incumbent operations. Further, terminating the grant when the incumbent gives notification it will be commencing service in a specific area does not require anything as complex as the dynamic SAS, the dynamic geolocation database required to protect mobile U.S. Navy ships and other incumbents from interference. In its NPRM on opening the 6 GHz band for unlicensed services, the Commission stated: "We envision the AFC system to be a simple database that is easy to implement."[18] The Commission's proposed AFC in the 6 GHz band can be easily replicated in other bands to facilitate use-it-or-share-it rules.

The United Kingdom's spectrum regulator, Ofcom, has also addressed the ability of databases to facilitate spectrum sharing frameworks. In a 2015 report, Ofcom observed that "[g]eolocation databases are making it easier for devices to identify spectrum that is available for sharing while protecting the operation of existing services. While the current focus is on the use of databases to manage access to TV white spaces within 470-790 MHz, the fundamental principle is not frequency specific and can extended to a broader range of frequencies."[19] As noted in a recent report released by the Dynamic Spectrum Alliance, "The growing need to accommodate burgeoning demand, smaller cell sizes, and more widespread deployments of local

[18] Notice of Proposed Rulemaking, ET Docket No. 18-295, GN Docket No. 17-183 (Oct. 23, 2018), ¶ 25.
[19] "A Framework for Spectrum Sharing," Ofcom, at 21 (July 31, 2015).

networks by a diverse range of users will push NRAs toward more sharing of underutilized bands. As this occurs, it becomes impractical for regulators to rely on manual coordination or to employ the staff necessary to shoulder all of the functions listed above. Even if possible, it's far faster and more cost-effective to rely on an automated system and focus agency resources on higher value-added activities."[20]

B. Adding a General Use-or-Share Authorization Managed by Automated Frequency Coordination Promotes Rural Coverage, Efficient Secondary Market Transactions and the Broader Public Interest

Rural, unserved, and other hard-to-serve areas have the greatest need for high-speed broadband that can be facilitated by the repurposing of unused spectrum in those areas. The areas with more unused spectrum tend to be the regions where costs are highest relative to ARPU and small and rural ISPs cannot afford to buy exclusive, large-area licenses. Use-it-or-share-it rules, implemented in bands with equipment readily available, can empower aggregation with other bands to expand capacity and improve quality of service even if use is only temporary.

Use-it-or-share-it creates a general incentive for licensees to pursue secondary market transactions since it identifies operators who see value in using the band in a particular local

[20] *Automated Frequency Coordination: An Established Tool for Modern Spectrum Management*, Dynamic Spectrum Alliance, at 33 (March 2019) ("DSA Report") ("Regulators can choose to create or authorize an automated frequency coordination system to do any or all of the following functions at scale and at low or no cost to the agency itself: Collect, ingest and regularly update incumbent information from agency licensing records or as provided by NRA rules; Calculate protection contours and other algorithms by applying NRA rules; Verify that all registered device are certified in compliance with NRA rules; Register verified devices and networks, recording any required data on user identity, location, device type, operating parameters; Calculation engine: apply objective algorithms to grant or deny requests for permission to operate for whatever period of time is provided in NRA rules; Optimize coexistence among secondary users, if relevant, based on NRA rules; Collect any usage or regulatory fees authorized or required by the NRA; Capture data and report on actual use of the band, as well as any anomalies that may inform future regulatory action; Maintain the ability to identify and shut down a device or provider in cases of harmful interference or emergency; Dynamically adjust the device admission or operating parameters (in response, for example, to exceeding an aggregate interference threshold in a geographic area). Provide a portal for incumbents and/or users to report corrections or updates to licensing data, operating parameters, or to report incidents of interference.").

area. This "demand discovery" puts market-based pressure on licensees to partition and/or lease. With use-it-or-share-it rules in place, licensees will more readily identify small carriers as prospects for longer-term and more secure partitioning or leasing arrangements.

On the buy side, opportunistic access creates a market for interference protection, serving as an intermediate step between non-use and paying the licensee for partitioning and leasing spectrum. Opportunistic access can also serve as a form of price discovery. A small operator can do initial and test deployments to see if paying for interference protection would actually be worth the cost. Some small ISPs will determine that opportunistic use – temporary and without protection from interference – is all they can afford or justify, while others will 'trade up' to negotiate and purchase a partitioned license or leasehold as a means of ensuring continued and exclusive use for a set period of years.

These steps will benefit very small, rural, and other local operators that do not have the funds to pay for (or do not need) interference protection, or where the transaction costs are simply too high to make it worthwhile for licensee. For example, a school or business may decide it could enhance the capacity of its network by adding temporary, opportunistic use of locally-vacant spectrum. Whether or not they ultimately come to an agreement to pay for exclusive use – through partitioning or leasing – the public benefits when unused spectrum, a resource that is infinitely renewable, is used to improve connectivity.

Another potential incentive for licensees that could be coupled with use-it-or-share-it deployments is described in the NPRM in relations to the current rules for *de facto* leases: "While the licensee/lessor remains responsible for compliance with any construction and performance requirements . . . the licensee/lessor may attribute to itself the build-out or performance activities of its spectrum lessee(s) for purposes of compliance with any such

requirements."[21] Essentially, licensees could receive credits toward meeting construction or performance requirements without actually transferring the spectrum. The FCC could decide to allow licensees to attribute all or a portion of the buildout and coverage by opportunistic users at the end of the licensing period to the licensee for purposes of renewal, a significant incentive to if it helps a licensee satisfy interim or final performance requirements. In turn, another provider gains the opportunity to put that spectrum to use until the licensee is ready to commence service in that area. Licensees should be fully protected from interference while retaining the "flexibility to determine the amount of spectrum they will occupy and the geographic area they will serve," as the NPRM itself states.[22]

Automation and database coordination are central to how use-it-or-share-it rules can stimulate high-speed broadband deployment in rural areas while fully protecting the license rights of incumbents. When the Commission adopted its 1996 CMRS Partitioning and Disaggregation Order,[23] the concept of automated frequency coordination databases was more than a decade away. However, now that AFCs are both proven to be effective and available from a number of competing private sector providers, the Commission should seek to leverage the SAS and new special purpose databases to manage opportunistic sharing of unused capacity. OTI and PK were among a coalition of public interest advocates and technology companies that detailed to the Commission how spectrum sharing, fueled by database coordination, can make

[21] NPRM ¶ 8, citing 47 CFR § 1.9020(d)(5).
[22] NPRM ¶ 8, citing See, e.g., Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands, Report and Order and Order of Proposed Modification, 27 FCC Rcd 16102, 16194-96, paras. 244-53 (2012) (AWS4); Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Second Report and Order, 22 FCC Rcd 15289, 15381, 15355-58, paras. 178-88 (2007) (Lower 700 MHz); Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, Second Report and Order, 12 FCC Rcd 19079, 19127-54, paras. 138-227 (1997) (800 MHz and 900 MHz SMR).
[23] NPRM at note 2.

effective and efficient use of the C-Band in the 3.7-4.2 GHz band.[24] AFC coordination would enable high-capacity fixed wireless use of unused spectrum capacity in the band while protecting incumbent satellite services.

The uses of databases to facilitate use-it-or-share-it rules to promote high-speed broadband in rural areas also protect licensees from interference or delays in commencing service, just as they do under the TVWS and CBRS rules. As a value-added service, AFC databases can help ISPs find spectrum and facilitate secondary market transactions such as leasing. For example, blockchain functionality can be incorporated into AFC databases, as the recent report from the Dynamic Spectrum Alliance articulated: "Blockchain may have the potential to enhance frequency coordination and secondary market transactions, particularly in shared bands that will need (or benefit from) an AFC database."[25] In fact, the implementation of an online portal to notify ISPs, in the same manner of the current CBRS rules, would be far less burdensome than even the current "lightweight" notification that applies to spectrum manager leases in which the licensee retains de facto control.[26]

[24] "A Mid-Band Spectrum Compromise For Rural Broadband: Wins All Around," The Open Technology Institute Blog (April 9, 2018), https://www.newamerica.org/oti/blog/mid-band-spectrum-compromise-rural-broadband-wins-all-around/.
[25] DSA Report at 51.
[26] NPRM ¶ 9 ("In general, de facto transfer spectrum leasing arrangements are subject to the Commission's general approval procedures, under which the licensee/lessor and proposed lessee must file an FCC Form 608, and the Commission must grant the application prior to the parties' putting the proposed spectrum leasing arrangement into effect.").

IV. Conclusion

The Commission should adopt use-it-or-share-it rules on spectrum licensees as part of any program to improve the functioning of secondary markets and the efficient use of spectrum. The technology is available to promote more intensive use of this public resource for the purpose of narrowing the digital divide while simultaneously encouraging secondary market transactions and ensuring licensees suffer no harmful interference or diminution of their right to exclusive use (but not non-use) of flexible use spectrum. OTI and PK urge the Commission to help bridge the rural digital divide by adopting a use-it-or-share-it rule for exclusively-licensed bands moving forward.

Respectfully submitted,

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